

## Important notes

- All examinations should be passed to complete the basic requirements of the course and receive a passing grade. This does not mean that each point listed for an examination event must be completed in order for the examiner to provide a passing grade, because grading in this course is done *qualitatively* and not quantitatively. There may be reasons for not being able to complete some part of an exam which can be unforeseen, clear, extenuating, and outside of a student's control. If there is some problem, we ask students to inform the course responsible in a timely manner either in person, by email, or by phone. Opportunities to retake an exam will be offered more than once in a year.
- There is a subjective component to any such evaluation which is not ideal but cannot be avoided. (Quantitative evaluations also incorporate a subjective component, and researchers also receive subjective evaluations on the papers they submit.) Therefore, at the end of the course each student will also be asked to describe to the examiner which grade they feel they deserve and why, before grades are given.
- If there is a problem working in the group we ask that the student contacts the course responsible immediately and not in a week or a month or just before an exam. Furthermore we suggest as a first recourse that the group meets with the course responsible and tries to resolve the problem by communicating. If a problem cannot be resolved, as a last recourse changes in group memberships may be considered.
- The student is responsible for scheduling times and places for their group to meet to work together. In doing so each student's needs must be considered. For example, some students might not be comfortable in meeting in a private setting such as someone's room, at night, or on weekends. Rooms are available at the university for groupwork, such as the project room on E1, which students are encouraged to use. Also, meetings must begin soon into the course in order to be on time to meet the tollgates, so students are encouraged to form groups and meet as soon as possible after the course starts. And, for platooning cooperation is required between more than one group; the student is responsible for finding times to meet and collaborate with others groups.
- In some cases in a group there may not be one student from each background (embedded, intelligent, and communications) or fewer or more members than other groups; robots and materials made available will probably also have slightly different capabilities; and the schedule for lectures and labs is tentative due to the nature of the course (there are many teachers, who might become sick or might have to deal with other responsibilities) so students should check blackboard regularly for any changes to be announced.
- Special treatment cannot be given for a student who lives far away or not in Halmstad (e.g., in Gothenburg or Malmö). By choosing to enroll in the course a student agrees to spend a certain amount of time each week working on the course (e.g., to work with others on their projects and attending lectures and labs), irrespective of commuting time. Without engaging in learning activities course objectives such as collaborating with others cannot be met.
- all rules, addressed or not addressed above, e.g., regarding decisions by examiner (they are final) and exams (a passing grade cannot be given for a missing or interrupted result), are in

accordance with the usual legal procedure at Halmstad University (there is equal treatment and legal certainty; more information can be obtained from, e.g., the Student Affairs section).

Please note also some additional definitions and considerations:

- “Basic skills and knowledge” here refers to key concepts indicated in the teaching/learning activities in this course in regard to research and development (requirements specification/problem formulation, design/modeling, evaluation), embedded systems (e.g., real-time programming, communication, and odometry), and intelligent systems (e.g., path planning, sensor fusion, simulation, and image processing (slides and materials will additionally be made available on Blackboard for students who wish to check). Just as an example, the student should know at least at a basic level a difference between “waterfall” or “agile” development models, a Kalman or particle filter, MSB or LSB (or big-endian and little-endian), a process and a thread, kinematics and dynamics, medium-fidelity and low-fidelity simulations, CAM and DENM, TCP and UDP, RGB and HSV.
- The first ILO also includes “collaborating”. It is important for the student to be able to collaborate because systems engineering is rarely conducted by only one person.
- “Hypothesizing” here is used in a general sense; we all engage in some form of hypothesizing in everyday life (e.g., when we guess what we will do on the weekend), and the aim here is just to bring this creative thought to play also in the topic of designing embedded and intelligent systems. Regarding the order of the learning outcomes, creativity is a highly important quality to develop for preparing students to engage in novel work (research) at the master’s level. Also, creativity is possible even without a deep knowledge of a field; thus it can come before a deep capability to reflect and judge based on excellent methodologies.
- “Reflecting” can also be defined in various ways; here we take it to mean a documentable activity of self-assessment and adaptation conducted by the student during learning. For example, the student can describe design options or initial approaches tried and rejected; for describing trouble-shooting, symptoms can be listed, followed by possible causes, and potential solutions; and one short line each week describing progress/plans for the next week could be recorded.